Univ. of Washington, Bothell Engineering and Mathematics Engineering and Mathematics Term: Summer 2015
Evaluation Delivery: Online Evaluation Form: A Responses: 5/10 (50\%)

Taught by: Nicole Hamilton Instructor Evaluated: Nicole Hamilton

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

| Median | College Decile |
| :---: | :---: |
| $\mathbf{4 . 4}$ | $\mathbf{5}$ |
| (0=lowest; $5=$ highest) | (0=lowest; $9=$ highest) |

Challenge and Engagement Index (CEI) combines student responses to several IASystem items relating to how academically challenging students found the course to be and how engaged they were:
CEI: 5.8
(1=lowest; 7=highest)

## SUMMATIVE ITEMS

|  | N | Excellent <br> (5) | Very Good (4) | Good (3) | Fair <br> (2) | Poor (1) | $\begin{aligned} & \text { Very } \\ & \text { Poor } \\ & (0) \end{aligned}$ | Median |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| The course as a whole was: | 5 | 40\% | 40\% | 20\% |  |  |  | 4.2 | 5 | 6 |
| The course content was: | 5 | 40\% | 40\% | 20\% |  |  |  | 4.2 | 5 | 6 |
| The instructor's contribution to the course was: | 5 | 60\% | 20\% | 20\% |  |  |  | 4.7 | 6 | 7 |
| The instructor's effectiveness in teaching the subject matter was: | 5 | 40\% | 40\% | 20\% |  |  |  | 4.2 | 4 | 5 |

## STUDENT ENGAGEMENT



On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?


COURSE SUMMARY REPORT
Numeric Responses

## STANDARD FORMATIVE ITEMS

|  | N | Excellent <br> (5) | Very Good (4) | Good (3) | Fair (2) | Poor <br> (1) | Very Poor (0) | Median | DECILE RANK Inst College |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Course organization was: | 5 | 40\% | 20\% | 40\% |  |  |  | 4.0 | 4 | 4 |
| Clarity of instructor's voice was: | 5 | 40\% | 60\% |  |  |  |  | 4.3 | 3 | 4 |
| Explanations by instructor were: | 5 | 40\% | 40\% | 20\% |  |  |  | 4.2 | 5 | 5 |
| Instructor's ability to present alternative explanations when needed was: | 5 | 40\% | 40\% | 20\% |  |  |  | 4.2 | 4 | 5 |
| Instructor's use of examples and illustrations was: | 5 | 60\% | 20\% | 20\% |  |  |  | 4.7 | 6 | 7 |
| Quality of questions or problems raised by the instructor was: | 5 | 40\% | 60\% |  |  |  |  | 4.3 | 5 | 6 |
| Student confidence in instructor's knowledge was: | 5 | 40\% | 40\% | 20\% |  |  |  | 4.2 | 2 | 3 |
| Instructor's enthusiasm was: | 5 | 40\% | 60\% |  |  |  |  | 4.3 | 2 | 3 |
| Encouragement given students to express themselves was: | 5 | 80\% | 20\% |  |  |  |  | 4.9 | 8 | 8 |
| Answers to student questions were: | 5 | 40\% | 40\% | 20\% |  |  |  | 4.2 | 4 | 5 |
| Availability of extra help when needed was: | 5 | 60\% | 20\% | 20\% |  |  |  | 4.7 | 7 | 7 |
| Use of class time was: | 5 | 40\% | 60\% |  |  |  |  | 4.3 | 5 | 5 |
| Instructor's interest in whether students learned was: | 5 | 40\% | 60\% |  |  |  |  | 4.3 | 4 | 4 |
| Amount you learned in the course was: | 5 | 40\% | 40\% | 20\% |  |  |  | 4.2 | 5 | 5 |
| Relevance and usefulness of course content were: | 5 | 40\% | 60\% |  |  |  |  | 4.3 | 5 | 5 |
| Evaluative and grading techniques (tests, papers, projects, etc.) were: | 5 | 40\% | 60\% |  |  |  |  | 4.3 | 5 | 6 |
| Reasonableness of assigned work was: | 5 | 60\% | 40\% |  |  |  |  | 4.7 | 7 | 8 |
| Clarity of student responsibilities and requirements was: | 5 | 40\% | 20\% | 40\% |  |  |  | 4.0 | 3 | 3 |

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Evaluation Delivery: Online
Evaluation Form: A
Responses: 5/10 (50\%)
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Taught by: Nicole Hamilton
Instructor Evaluated: Nicole Hamilton

## STANDARD OPEN-ENDED QUESTIONS

## Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. This was a fantastic class. In the 250+ credits l've earned in my time at the UW and other institutions, this class was probably the best l've ever had. Everything was interesting and useful for a career in EE. While I had some background coming into the course, the amount I learned was incredible. From using Karnaugh maps to evaluate combinatorial logic to the experience of programming an FPGA, I really felt that I learned some important tools to assist in a design career. Were it not for Nicole's class, I probably would have dropped out of the program with deep disappointment. The quality of instruction in my other two courses were subpar. Nicole genuinely cares about her students' learning -- and the effort she put into the course was very evident.
2. Yes, major stretching of the mind.
3. Yes, the class was intellectually stimulating. We got practical, hands-on experience with Verilog, more so than previous EE271 classes before.
4. Yes. I enjoyed learning about logic design and how is it applicable in the real world

## What aspects of this class contributed most to your learning?

1. The lectures were great! Fascinating topics delivered in a high quality manner. The labs very much reinforced what we were learning in lecture and gave us the opportunity to put into practice what we were learning. I strongly recommend Nicole for teaching 271: she really knows the material and knows how to present it in an engaging manner.
2. Lab
3. Definitely Lab 3, by far the most difficult but most rewarding lab l've done up until this point. A month-long project, it required deep thinking, teamwork, humility, and commitment.
4. Going through examples in class.

## What aspects of this class detracted from your learning?

1. Nothing distracted from my learning in this class. We had great discussions during the course.
2. Lab
3. Many times, there was too much information on slides. Students new to the topic will get information overload. Writing on dry-erase board might be better sometimes.
4. N/A

## What suggestions do you have for improving the class?

1. I think the class was perfect the way it was. I was initially concerned that without having homework to practice, I wouldn't grasp the concepts fully ... but the thoughtfully designed labs took care of this concern. The desire to get the labs working propelled us through the course and probably gave us more practice than any textbook-based homework would have done. Truly, this was one of the best courses l've taken. l'm looking forward to taking more classes with Nicole. It's clear that teaching is her priority -- I felt I got my money's worth with this course. I'd suggest that other instructors "pop in" to Nicole's classes to get a feel for what quality instruction looks like.
2. I think the entire class program covered more ground than students can normally handle. This is probably not the instructor's fault, probably just pressure from faculty. Let the instructor teach at own pace.
3. Excellent teaching by Nicole Hamilton, I found the class perfect!

COURSE SUMMARY REPORT
Numeric Responses
Univ. of Washington, Bothell Engineering and Mathematics Engineering and Mathematics Term: Summer 2015
B EE 271 AA
Digital Circuits And Systems

Evaluation Delivery: Online
Evaluation Form: H
Responses: 2/5 (40\%)
Taught by: Nicole Hamilton
Instructor Evaluated: Nicole Hamilton
Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

| Median | College Decile |
| :---: | :---: |
| 3.9 | 3 |
| (0=lowest; $5=$ highest) | (0=lowest; $9=$ highest) |

Challenge and Engagement Index (CEI) combines student responses to several IASystem items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 5.2
(1=lowest; 7=highest)

## SUMMATIVE ITEMS

|  | N | Excellent <br> (5) | Very Good (4) | Good (3) | Fair <br> (2) | Poor (1) | Very Poor <br> (0) | Median | DECILE RANK Inst College |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| The lab section as a whole was: | 2 |  | 50\% | 50\% |  |  |  | 3.5 | 2 | 2 |
| The content of the lab section was: | 2 | 50\% | 50\% |  |  |  |  | 4.5 | 7 | 7 |
| The lab instructor's contribution to the course was: | 2 |  | 100\% |  |  |  |  | 4.0 | 2 | 3 |
| The lab instructor's effectiveness in teaching the subject matter was: | 2 |  | 50\% | 50\% |  |  |  | 3.5 | 1 | 2 |

## STUDENT ENGAGEMENT



COURSE SUMMARY REPORT
Numeric Responses

## STANDARD FORMATIVE ITEMS

|  | N | Excellent <br> (5) | Very Good (4) | Good (3) | Fair <br> (2) | Poor <br> (1) | Very Poor (0) | Median | DECILE RANK Inst College |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Explanations by the lab instructor were: | 2 |  | 50\% | 50\% |  |  |  | 3.5 | 1 | 2 |
| Lab instructor's preparedness for lab sessions was: | 2 |  | 50\% |  | 50\% |  |  | 3.0 | 0 | 2 |
| Quality of questions or problems raised by the lab instructor was: | 2 |  | 100\% |  |  |  |  | 4.0 | 3 | 4 |
| Lab instructor's enthusiasm was: | 2 |  | 100\% |  |  |  |  | 4.0 | 1 | 2 |
| Student confidence in lab instructor's knowledge was: | 2 | 50\% | 50\% |  |  |  |  | 4.5 | 3 | 4 |
| Lab instructor's ability to solve unexpected problems was: | 2 |  | 100\% |  |  |  |  | 4.0 | 4 | 5 |
| Answers to student questions were: | 2 |  | 100\% |  |  |  |  | 4.0 | 3 | 4 |
| Interest level of lab sessions was: | 2 | 100\% |  |  |  |  |  | 5.0 | 9 | 9 |
| Communication and enforcement of safety procedures were: | 2 | 50\% | 50\% |  |  |  |  | 4.5 | 6 | 8 |
| Lab instructor's ability to deal with student difficulties was: | 2 |  | 50\% | 50\% |  |  |  | 3.5 | 2 | 3 |
| Availability of extra help when needed was: | 2 | 50\% |  | 50\% |  |  |  | 4.0 | 3 | 3 |
| Use of lab section time was: | 2 |  | 100\% |  |  |  |  | 4.0 | 4 | 4 |
| Lab instructor's interest in whether students learned was: | 2 | 100\% |  |  |  |  |  | 5.0 | 9 | 9 |
| Amount you learned in the lab sections was: | 2 | 50\% | 50\% |  |  |  |  | 4.5 | 6 | 7 |
| Relevance and usefulness of lab section content were: | 2 | 50\% | 50\% |  |  |  |  | 4.5 | 6 | 6 |
| Coordination between lectures and lab activities was: | 2 |  | 50\% | 50\% |  |  |  | 3.5 | 3 | 5 |
| Reasonableness of assigned work for lab section was: | 2 |  | 50\% | 50\% |  |  |  | 3.5 | 2 | 2 |
| Clarity of student responsibilities and requirements was: | 2 | 50\% | 50\% |  |  |  |  | 4.5 | 6 | 6 |

Taught by: Nicole Hamilton Instructor Evaluated: Nicole Hamilton

## STANDARD OPEN-ENDED QUESTIONS

## Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. Yes, this class was excellent and challenging. The lab section was worth its weight in gold, and was incredibly helpful. The problems presented were rather tough, and required quite a bit of extra time to fulfill, but the quality of the problems that we were solving were relevant and interesting.

## What aspects of this class contributed most to your learning?

1. The lab section. I feel that we just jumped into programming Verilog by trial and error. That methodology is how I learn, by giving it a shot and testing it.

## What aspects of this class detracted from your learning?

1. I think that every aspect of this class was worthwhile. The lecture introduced actual logic concepts, and then the lab section we learned Verilog by the seat of our pants. Verilog code was discussed in the lecture, but not tackled in depth.

## What suggestions do you have for improving the class?

1. The class was wonderful. In the future I think it may be helpful to incorporate additional Verilog exercises into the lecture section. I feel that we did a lot of evaluating Verilog code in the lecture, but we did not ever truly practice it.

Univ. of Washington, Bothell Engineering and Mathematics Engineering and Mathematics Term: Summer 2015
B EE 271 AB
Digital Circuits And Systems

Evaluation Delivery: Online
Evaluation Form: H
Responses: 3/5 (60\%)
Taught by: Nicole Hamilton
Instructor Evaluated: Nicole Hamilton
Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

| Median | College Decile |
| :---: | :---: |
| 4.8 | $\mathbf{8}$ |
| (0=lowest; $5=$ highest $)$ | (0=lowest; $9=$ highest) |

Challenge and Engagement Index (CEI) combines student responses to several IASystem items relating to how academically challenging students found the course to be and how engaged they were:
CEI: 5.8
(1=lowest; 7=highest)

## SUMMATIVE ITEMS

|  | N | Excellent <br> (5) | Very Good (4) | Good (3) | Fair (2) | Poor <br> (1) | Very Poor (0) | Median | DECILE RANK Inst College |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| The lab section as a whole was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 8 |
| The content of the lab section was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 8 |
| The lab instructor's contribution to the course was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 7 | 7 |
| The lab instructor's effectiveness in teaching the subject matter was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 7 | 8 |

## STUDENT ENGAGEMENT



On average, how many hours per week have you spent on this course,
Class median: $5.0 \quad(\mathrm{~N}=3)$ including attending classes, doing readings, reviewing notes, writing papers and any other course related work?


In regard to your academic program, is this course best described as:
In your major A distribution requirement An elective 100\%

COURSE SUMMARY REPORT

## STANDARD FORMATIVE ITEMS

|  | $N$ | Excellent <br> (5) | Very Good (4) | Good (3) | Fair <br> (2) | Poor <br> (1) | Very Poor (0) | Median | DECILE RANK Inst College |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Explanations by the lab instructor were: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 8 |
| Lab instructor's preparedness for lab sessions was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 7 | 9 |
| Quality of questions or problems raised by the lab instructor was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 8 |
| Lab instructor's enthusiasm was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 6 | 7 |
| Student confidence in lab instructor's knowledge was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 6 | 7 |
| Lab instructor's ability to solve unexpected problems was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 9 |
| Answers to student questions were: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 8 |
| Interest level of lab sessions was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 9 |
| Communication and enforcement of safety procedures were: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 9 |
| Lab instructor's ability to deal with student difficulties was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 9 |
| Availability of extra help when needed was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 8 |
| Use of lab section time was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 8 |
| Lab instructor's interest in whether students learned was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 7 | 7 |
| Amount you learned in the lab sections was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 8 |
| Relevance and usefulness of lab section content were: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 8 |
| Coordination between lectures and lab activities was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 9 | 9 |
| Reasonableness of assigned work for lab section was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 8 |
| Clarity of student responsibilities and requirements was: | 3 | 67\% | 33\% |  |  |  |  | 4.8 | 8 | 8 |

B EE 271 AB<br>Digital Circuits And Systems

Taught by: Nicole Hamilton Instructor Evaluated: Nicole Hamilton

## STANDARD OPEN-ENDED QUESTIONS

## Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. The lab section of 271 was great -- it reinforced the concepts we were learning in lectures and allowed us to grasp the concepts much easier by putting them into practice.
2. Yes, major stretching of the mind.
3. Yes. It was difficult with coding but I found each lab to be fun

## What aspects of this class contributed most to your learning?

1. The labs were well thought out and provided a very satisfying challenge (when they were completed). Also, this was the first course where we were expected to use the bench tools -- I was very thankful to be able to learn how to use the equipment. The hand-held tools required for the other classes just don't compare.
2. Lab
3. Going over lab instructions

## What aspects of this class detracted from your learning?

1. Nothing.. the lab session was great.
2. Lab
3. $\mathrm{N} / \mathrm{A}$

## What suggestions do you have for improving the class?

1. Each of the two lab sections was advertised as 2 hours per week, but we really needed to attend both sessions. I didn't mind this, as the labs were very interesting. But, I was aware that a few of my classmates were unable to attend both sessions, so I think they had a challenging time completing all of the work by the end of the quarter.
2. Excellent lab section
